

Octet Baryon Quark Flavor Distribution Functions

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Octet Baryon Quark Flavor Distribution Functions We investigate the quark flavor distribution functions of the octet baryons. In particular, the valence and sea quark flavor distribution functions of the scalar density matrix elements of octet baryons have been computed explicitly. The implications of chiral symmetry breaking and SU(3) symmetry breaking have been discussed in detail for the sea quark asymmetries, fraction of a particular quark (antiquark) present in a baryon, flavor structure functions and the Gottfried integral. The meson-baryon sigma terms have also been calculated. The future experiments for octet baryons can provide important constraints to describe the role of non-valence (sea) degrees of freedom.

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